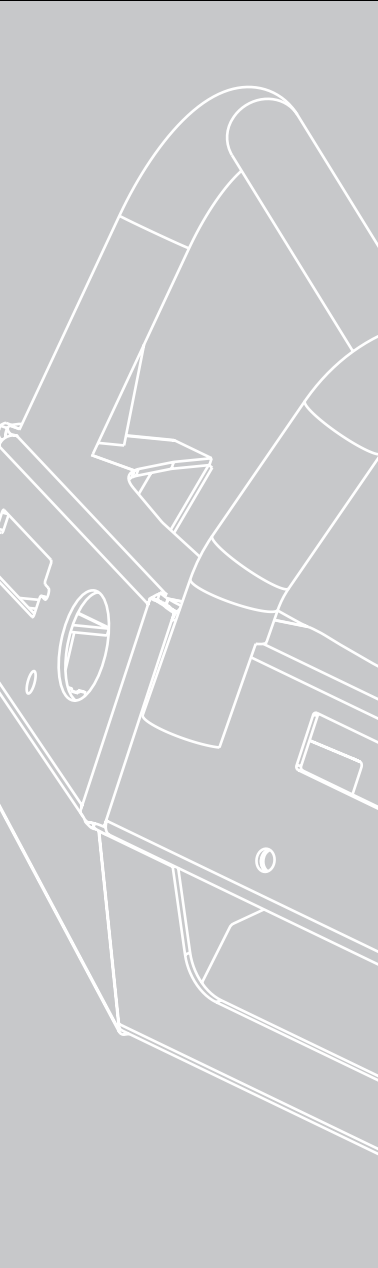




**Lighter
Stronger
Better!**

**Strongest Built
Australian Made
Lifetime Warranty**

PN:BT138SY



Fitting Guide & Owners Manual

Toyota Rav4 05/2019on Cruiser Models

Big Tube Bar with Bumper Lights
VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)
FOR AIR BAG & ADR COMPLIANT VEHICLES

Index

Pages 3-5

ECB's Benefits
Product Care

Pages 6-7

Stage 1 - Vehicle Testing and Preparation
Stage 2 - Remove bumper
Stage 3 - Remove Bumper reinforcement
Stage 4 - Lower air dam
Stage 5 - Steel mount installation
Stage 6 - Parking sensors

Pages 8-9

Stage 7 - Camera mounting
Stages 8, 8a and 8b - Light Wiring
Stage 9 - Bumper cut

Pages 10-11

Stage 10 - Refit bumper
Stage 11 - Indicator light installation
Stage 12 - Clip lock trim
Stage 13 - Protection bar installation
Stage 14 - Bumper light installation
Stage 15 - Check and test

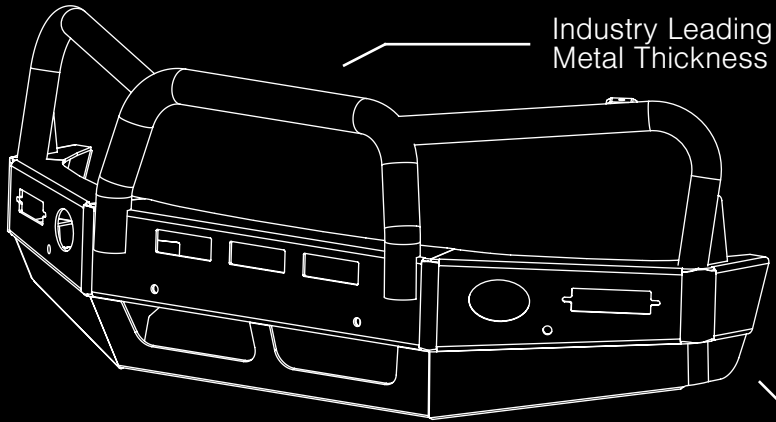
Pages 12-13

Final Checks & installation Kit
Finished Product

Pages 14-15

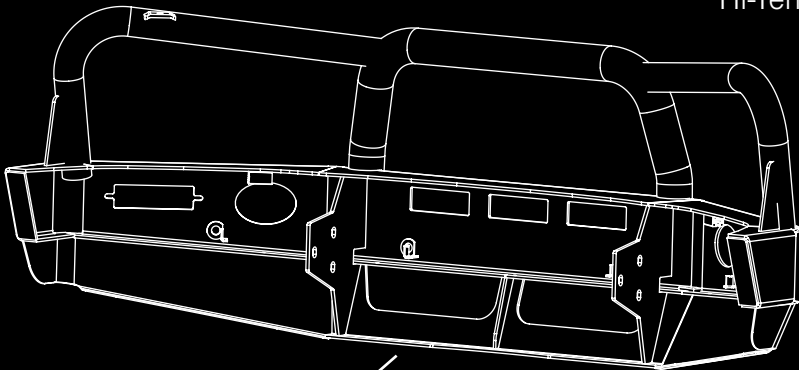
Warranty Registration

The Features of ECB



Industry Leading
Metal Thickness

6mm Thick
Hi-Tensile Alloy



Unmatched
Strength

Fully Welded
Construction

ECB's Benefits

Built to Perform - Not to a Price

ECB are proud to claim that their channels are not jigsaw puzzles that are bolted together, or even multiple sections welded together. Where any welding is required, it is done to the highest standards by qualified welders, not machines.

Anti-Corrosive Nature of Alloy

The composition of ECB's alloy has a very high resistance to corrosion. Rust not only looks unappealing but greatly reduces the strength of the metal. Rust can and will weaken the structural integrity of a steel bullbar effectively rendering it useless over time.

Australian Made

Established in 1971, we utilise decades of experience designing, engineering and building products in Australia to suit Australian conditions. We can ensure the best quality controls and help support the local economy and employ over 90 proud Australians.

Weight Saving Benefits

An ECB alloy bullbar is typically half the weight of a steel bullbar. Unnecessary suspension upgrades are not required. The reduced weight also contributes to increased fuel economy and less wear and tear on tyres, suspension and braking components.

Welds That Work

ECB uses only the strongest welds and welding techniques to ensure every product is as structurally sound as possible. MIG (Metal Inert Gas) welding techniques are employed ensuring the welds are as thick as the thickest section of alloy's being joined together.

Lifetime Warranty

ECB provide a lifetime warranty and consumer guarantee on all of our manufactured products. This guarantee highlights the confidence in our ability and provides complete peace of mind for your purchase for the lifetime you own your vehicle.

Product Care

Polished Products

Being a premium mirror polished finish, regular maintenance will be required to keep that iconic ECB shine. We recommend using our own brand of Aluminium Polish. This formula has been tried and tested and in our opinion is the world's best standard.

Directions: Apply a small quantity of Aluminium Polish to a clean soft cloth and rub the metal surface. The longer the rubbing the brighter the surface becomes. Wipe off Aluminium Polish with clean soft cloth. Also suitable for motorised buffing machines.

Note: There are more specific details on the polish bottle. Please read before use.

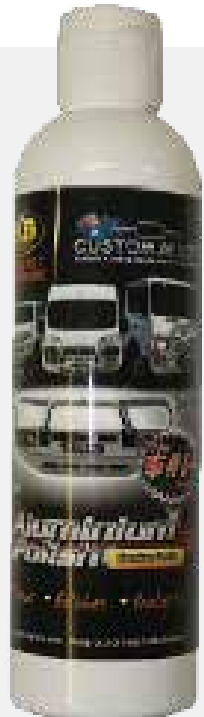
Powdercoated Products

Our powdercoated finishes are very low maintenance. Infact there is actually very little you will ever need to do for this product. Just clean it as you would your car and it will stay looking good as new.

ECB Aluminium Polish

When you're looking for that showroom finish look for your polished automotive products, you can depend on the no compromise quality of East Coast Bullbars Aluminium Polish. This specifically designed product is the best polish available and we guarantee that this \$#!+ works. Within our decades of manufacturing polished alloy products we have trialled a large range of different polishes on the market and believe without a doubt that nothing beats the finish quality of East Coast Bullbars Aluminium Polish.

East Coast Bullbars Aluminium Polish is excellent for use by hand and is ideal for polished bullbars, nudge bar and stainless steel products. This polish will clean, polish and protect your product from the elements whilst bringing your products back to that showroom finish look.



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Stage 1

- Test drive vehicle to ensure all driver assists are correctly working and to gauge effectiveness. Park on a flat level surface.
- Apply parking brake and lift bonnet.
- Unwrap ECB Protection bar and disconnect mounts. Discard bolts.
- Ensure these instructions are left with the vehicle owner and/or operator.



Stage 2

- On top of bumper remove four (4) 10mm head bolts, five (5) push pull clips. Remove plastic trim.
- From underside of vehicle remove six (6) 10mm head bolts.
- On inner guards remove one (1) phillips head screw, two (2) push pull clips (per side). Carefully unclip wheel arch mould from inside while pulling outwards.
- Remove one (1) clip in rear wing per side. Pull out on rear wing to unclip from guard and unplug wiring on passenger side.
- Remove bumper



Stage 3

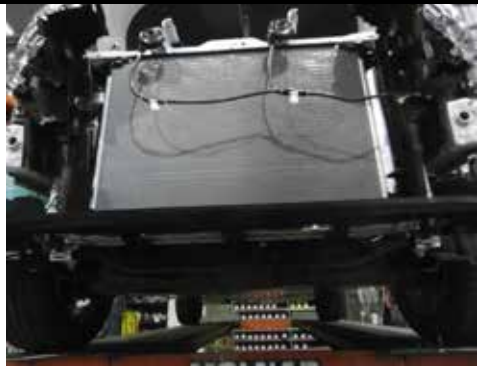
- Remove polystyrene infill from bumper reinforcement.
- Disconnect wiring from bumper reinforcement.
- Remove bumper reinforcement by removing three (3) 14mm head bolts per side.



TOYOTA RAV4 05/2019 ON

Stage 4

- Remove lower air dam, five (5) 10mm head bolts and allow under body guard to hang.



Stage 5

- Fit steel mounting bracket (supplied) onto the end of chassis rail using original equipment bolts. Place one (1) 30mm spacer washers (per side) (supplied) between chassis rail and steel mounting bracket on locator pin.
- Remove lower alloy crash can one side at a time by removing one (1) 19mm head bolt, two (2) 12mm head nuts and one (1) 12mm head bolt per side.
- Using steel mounting bracket as a guide drill two 10mm hole into under side of rail. Enlarge hole in side of rail to fit bolt on wire. Blow filings clear and treat all exposed metal with a rust inhibitor.
- In rear hole fit one (1) M10 X 1.5 x 50mm bolt and flat washer on wire, flat washer, spring washer and nut (supplied). In front hole fit one (1) M10 x 1.5 x 50mm bolt, spring and flat washer, nut and washer on wire (supplied). Refit crash cans.



Stage 6

- Remove parking sensors from bumper.
- Relocate parking sensor into sensor housing in Protection Bar. CAUTION: Sensor plugs and mounts are directional. There is a raised segment on front under clip area of sensor.
- Using Quick click harness (supplied), feed harness through sensor holes in bumper cover and connect to original equipment wiring harness.



NOTE: Holes in bumper will need to be enlarged to allow wiring harness to fit through. Try to feed wiring in an area where it will be least seen by the customer.

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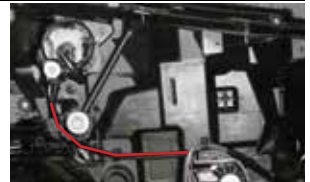
Stage 7

- Remove camera from bumper, two (2) phillips head screws.
- Extend camera wiring harness 200mm using wire and solder joiners (supplied) Place wiring into convoluted tubing (supplied).
- Place camera into protection bar using two (2) M6 bolts, flat washers and nyloc nuts (supplied).
- NOTE: Overheating of connectors will cause the plastic sheathe to melt, while under heating will not melt the solder enough to create a strong connection. Hold joint still until solid for good join.



Stage 8

On this vehicle there are two types of headlight, a hybrid headlight and a standard halogen headlight. NOTE: Both headlights look similar from the front.



For the purposes of wiring the lights there is a main factor to tell them apart. On the rear outer corner of the headlight behind the edge of the DRL on the standard light is a black connector connected to an aluminium heat sink. On the other light the connector and heat sink are missing and the casing has been left blank.

Stage 8A below is the wiring for the Halogen style headlight.

Stage 8B on the next page is the instruction for the Full LED headlight. This is technically advanced, so if you are not confident regarding wiring to the inside of the vehicle, please consult an auto electrician.

Stage 8a Light with Heat Sink

- Splice ECB wiring harness into wiring harness behind headlight. Two wires are used on the headlight and two wires on the headlight main connector.
- Find indicator and DRL connector on inside and outside of rear of light respectively. With lock to top, Pin one is on the left side of the plug.
- Positive wire - Indicator plug pin 1
Positive wire - Park plug pin 2
Positive wire - main light harness pin 4
Earth wire - main light harness pin 12
- Ensure harness is clear of sharp edges and moving parts.
- Connect ECB Quick Click bumper light wiring harness (supplied) into original wiring harness.
- It is recommended to solder and cover all connections on this light.



Indicator Plug

Park Plug

Wiring information



TOYOTA RAV4 05/2019 ON

Stage 8b Hybrid light, blank rear

Fitment to the headlight is as per the wiring of the non-hybrid headlight as specified in Stage 8A. From the headlight the signal for the indicator, DRL and earth (ground) can be found on the rear of the headlight. Signal for the parking light is found within the steering column.

Parking Light

- Carefully press sides of steering column trim from under the join to unclip the top of the trim.
- Unclip both sides and front.
- Caution: top of the steering column trim is attached to the dash panel. Do not remove.
- Turn the steering wheel to access and remove two PK screws
- Remove PK screw from lower centre of trim.
- Remove lower trim.
- Under the steering column locate the **Yellow plug. DO NOT REMOVE THIS PLUG, it is attached to the air bag system. Any electrical spark or rough handling could cause the airbags to deploy. Care is required.**
- Beside the yellow plug is a black plug, remove this plug for ease of access.
- Attach wire to the light grey/ black (pin 7) of this plug.
- Carefully refit plug. Refit trim.
- Run wiring to passengers side of vehicle, through firewall and forward to both headlights. Encase wiring in split loom tubing (Not supplied) and zip tie (Not supplied) to existing wiring of vehicle.
- Connect and test all wiring.



Stage 9

- Refit bumper to vehicle in the reverse of stage 2, using original equipment fixings.



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Stage 10

- Refit bumper to vehicle in the reverse of stage 2, using original equipment fixings.



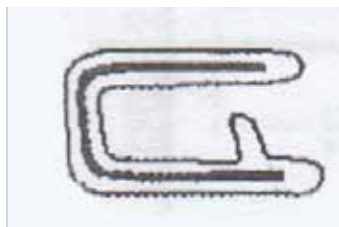
Stage 11

- Fit ECB LED indicator / DRL / park lights into protection bar as per instructions supplied with the LED indicator kit.
NOTE: Ensure park light is to top.



Stage 12

- Attach 6mm clip lock trim (supplied) to top of ECB protection bar. NOTE: Trim off lower edge on an angle so trim will sit flush with end of protection bar.



TOYOTA RAV4 05/2019 ON

Stage 13

- Fit ECB protection bar onto steel mounting brackets with three (3) M12 x 1.5 x 40mm bolts, flat washer, spring washer and nuts (per side) (supplied).
- Align protection bar to vehicle and **tighten all bolts.**
- Check sensors and camera for correct operation



Stage 14

- Attach ECB bumper lights to protection bar. Place M6 x 20 bolts, spring washers (supplied) through light mount from inside and attach nut to top. Slide assembly into light mount in Protection bar and centralize light to hole. **TIGHTEN FIRM ONLY.**
- Install bumper light surrounds (supplied) to fog light openings and towhook openings. Large side of surround to inside of opening on openings.



Stage 15

- Connect and check all lights.
- Test drive vehicle to ensure the correct operation of all driver assists.

Final Checks & Installation Kit

Ensure Number Plate is Clearly Visible

Note: When fitting/refitting the licence plate to the vehicle, ensure there is no obstruction to licence plate vision in accordance with local authorities. If required relocate licence plate to an alternate location.

Further VFPS Notes

1. Do not attach VFPS to the vehicle using anchorages not intended for this purpose (e.g. engine mounting bolts).
2. Do not use this product for any vehicle make or model, other than those specified by the VFPS manufacturer.
3. Do not remove the plaque or label from the VFPS.
4. Do not modify the structure of the VFPS in any way.
5. No accessory or fitment should project forward of the VFPS forward profile.
6. **Ensure these instructions are left with the vehicle owner and/or operator.**

Important Information

Periodically check bolts and nuts for correct tightness, especially if traveling on rough roads.

Installation Kit

1 - Steel mounting bracket	4 - M6 flat washer
2 - 30mm round spacer washer	2 - M6 spring washers
6 - M12 x 1.5 x 40 mm bolts	2 - M6 nuts
12 - M12 flat washers	2 - M6 nyloc nuts
6 - M12 spring washers	1- ECB Indicator / DRL / Park Light kit
6 - M12 x 1.5 nuts	1- Bumper light kit
2 - M10 x 1.5 x 50mm bolt and washer on 300mm wire	1- Quick click kit (IC10D40S1004ECBH)
2 - M10 x 1.5 x 50mm bolts	2 - Quick click kit (IC19TOR4SP1H)
4 - M10 flat washers	4 - Bumper light surrounds
4 - M10 spring washers	1 - 2400mm length 6mm clip lock.
2 - M10 x 1.5 nut and washer on 300mm wire	1 - 200mm length five core wire
2 - M10 x 1.5 nuts	10 - Solder joiners
4 - M6 x 20mm bolts	1 - 250mm length 10mm convoluted tube

Finished Product



Warranty Registration

Contact Details

Name: _____

Address: _____

Product: **BT138SY** _____

Email: _____

Phone: _____

Work Order Number: _____

You can find this on the silver label
of your ECB product.

By submitting this registration you automatically subscribe to ECB's mail outs. You
can unsubscribe at any time.

Register Online

For online registration please go online to www.ecb.com.au/warranty-registration. If
you have any questions please contact our national office on 1800 069 145 or www.ecb.com.au.

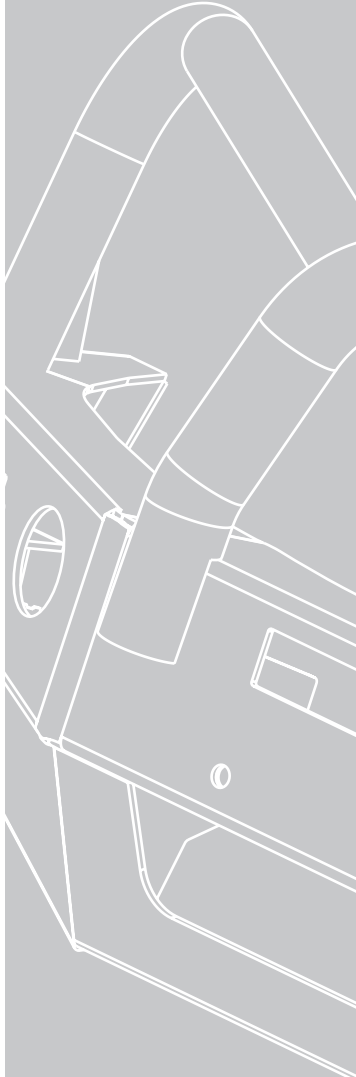
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REPLACES: 23.03.20

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